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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,807	03/14/2002	Thomas W. Getzinger	MICR0269	3088

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EXAMINER	
PHAM, HUNG Q	

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/099,807	GETZINGER ET AL.	
	Examiner	Art Unit	
	HUNG Q PHAM	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- *Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.*
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). *Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment.* See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) *1-11 and 19-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12,13,15-18,29,30 and 32-34* is/are rejected.

7)☒ Claim(s) *14 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *05/03/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-11, and 19-28 are drawn to a method and system for compressing files by determining a plurality of compressed sizes and compressing the files, which is classified in class 707, subclass 101.

II. Claims 12-18, and 29-34 are drawn to a method and system for selecting a quality level when compressing each of a set of image file by determining a quality level for compressing, which is classified in class 382, subclass 250.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I-II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. For example, Group I is drawn to a method and system for compressing files by determining a plurality of compressed sizes and compressing the files, Group II is drawn to a method and system for selecting a quality level when compressing each of a set of image file by determining a quality level for compressing. See MPEP 806.05(d).

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with applicant's representative, Ronald Anderson, on 09/02/2004, a provisional election was made with traverse to prosecute the invention of Group II, claims 12-18, and 29-34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-11, and 19-28 are withdrawn from further consideration, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

5. The information disclosure statement (IDS) submitted on 05/03/2002 was filed before the mailing of the first Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

6. Claims 15 and 32 is objected to because of the following informalities: ***determining a desired size for the compressed image file for each of the other image files in the set that was not identified in step (b) of claim 11***. Claim 15 is a dependent claim of claim 12, not 11 as recited in claim 15, and similar to claim

15, claim 32 recites ***claim 27*** in step ***(a) determining***. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 12 and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As in claims 12 and 29, the step of ***identifying image files of the set that will be compressed with the predefined minimum quality level as a function of (i) the maximum compressed file size of each image file when compressed to the predefined minimum quality level and the (ii) weight of each image file*** was not described in the specification.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 16 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As in claims 16 and 33, preceding step (d) is three steps (a), (b) and (c). However, step (d) recites ***repeating the preceding two steps with successive new quality levels***. The undefined two steps for repeating made the claim indefinite.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any

inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 12-13, 15-18, 29-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryniarski et al. [USP 6,195,462 B1] in view of Bryniarski et al. [USP 5,974,182].

Regarding to claims 12 and 29, Bryniarski [462] teaches a method of compressing image files (Bryniarski [462], Col. 1, Lines 5-6). As shown in FIG. 8 is the process with a set of a plurality of images, and is essentially the same as the process of FIG. 7 (Bryniarski [462], Col. 11, Lines 44-49). A collection of low-resolution images is identified and inputted at block 200, then two-resolution scale factors, SF1 and SF2, as ***weights*** are determined at blocks 202 and 210 (FIG. 8). When compressed with scale factor SF1, this compression yields a data point (Rt, DS1) as in FIG. 3, which represents this image, at resolution Rt as ***minimum quality level*** and data size DS1 as ***maximally compressed file size*** (Col. 8, Lines 6-24). SF1 is used to estimate SF2 for the image needed to obtain the aim compressed image size DSf (Col. 8, Lines 24-30). Thus, similar to SF1, SF2 implies a corresponding resolution R as ***a nominal quality level*** and a particular

data size DS as ***a nominal compressed file size***. In short, the technique as discussed above indicates the step of ***processing the image files to determine a maximally compressed file size for each image file when compressed to a predetermined minimum quality level and to determine a nominal compressed file size when compressed to a nominal quality level and to determine a weight for each image file***. As shown in FIG. 1, the relationship between image resolution and compressed image size is approximately linear at any given scale factor. Thus, based on this relationship, the image resolution such (Rt) could be defined based on compressed image size (DS1) and scale factor (SF1). In different words, the ***predefined minimum quality level*** is ***a function of the maximally compressed file size*** and the ***weight***. Referring back to FIG. 8, the collection of low-resolution images is inputted at block 200, obviously, identified by one its properties, such as filename, for inputting. This collection will be compressed by using the scale factor SF1 at block 202. In short, the technique as discussed performs the step of ***identifying image files of the set that will be compressed with the predefined minimum quality level as a function of the maximum compressed file size of each image file when compressed to the predefined minimum quality level and the weight of each image file***. As shown at block 212 of FIG. 8, ***for*** the high resolution images or ***all other image files of the set that were not identified to be compressed with the predefined minimum quality level in step (b)***, a more accurate scale factor as a ***weight*** with a corresponding resolution R as ***a quality level*** and a particular data size DS as ***a desired size as a function of*** the scale factor or ***weight for compressing*** is ***determined*** at block 216 and loop back to 211-212 to ensure the total size of the

compressed image files will fit on a single floppy disk as ***predefined limit*** (Col. 12, Lines 4-9), and the size is determined at block 206. In different words, the technique as discussed illustrates the claimed ***for all other image files of the set that were not identified to be compressed with the predefined minimum quality level in step (b), determining a quality level for compressing the other image files so that each of the other image files will be compressed to a desired size selected as a function of the weight of the image file and so that the total size of the compressed image files will not exceed the predefined limit.*** The low resolution images as ***the image files identified in step (b) with the predefined minimum level, and*** the high resolution images as ***all of the other image files not identified in step (b) with the quality level that was determined in step (c)*** are ***compressed*** at blocks 202 and 212. Bryniarski [462] does not explicitly teach the determined scaling factor or weight is based upon ***a high frequency energy content of the image file***. Bryniarski [182] illustrates a relationship between the scaling factor with the frequency image content as in FIG. 3-4, and FIG. 3-4. As shown in the two figures, the higher of a determined scaling factor, the better of the frequency image content. Thus, a scaling factor or ***weight*** can be ***determined based upon*** a desired the frequency image content or ***high frequency energy content of the image file***. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Bryniarski [462] technique by including the frequency image content for determining the scaling factor as taught by Bryniarski [182] in order to compress a collection of images with a desired frequency image content.

Regarding to claims 13 and 30, Bryniarski [462] and Bryniarski [182] teaches all the claim subject matters as discussed in claims 12 and 29, Bryniarski [462] further discloses the step of ***limiting the quality level that is used for compressing the image files to a predetermined range that extends from the predefined minimum quality level to a substantially higher predefined maximum quality level*** (Bryniarski [462], FIG. 3).

Regarding to claims 15 and 32, Bryniarski [462] and Bryniarski [182] teaches all the claim subject matters as discussed in claims 12 and 29, Bryniarski [462] further discloses the steps of ***(a) determining a desired size for the compressed image file for each of the other image files in the set that was not identified in step (b) of claim 12, said desired size for the compressed image file being determined as a function of the image file; (b) determining an optimal quality level to apply to each of the other image files to achieve the desired size when the image file is compressed; and (c) determining a difference between the desired size and an actual size of the image file when it is compressed to the optimal quality level*** (Bryniarski [462], FIG. 8).

Regarding to claims 16 and 33, Bryniarski [462] and Bryniarski [182] teaches all the claimed subject matters as discussed in claim 15 and 32, Bryniarski [462] further discloses the steps of ***(a) starting with the nominal quality level, determining if the nominal compressed file size is less than the desired size by no more than a predefined difference, and if so, assigning the nominal quality level as the optimal quality level; and if not, (b) reducing a range from which to select a new***

quality level to try as the optimal quality level when compressing the image file, where the new quality level is determined using a model relating image quality to compressed file size; (c) determining if the compressed file size resulting from compressing the image file using the new quality level is less than the desired size by no more than the predefined difference, and if so, assigning the new quality level as the optimal quality level; and if not, (d) repeating the preceding two steps with successive new quality levels, until the optimal quality level is determined (Bryniarski [462], FIG. 8).

Regarding to claims 17 and 34, Bryniarski [462] and Bryniarski [182] teaches all the claim subject matters as discussed in claims 12 and 29, Bryniarski [462] further discloses ***the predefined limit is selected based upon one of: (a) a storage capacity of a storage medium on which the compressed image files are to be stored; and (b) a maximum permissible size of an attachment to an email, wherein the attachment comprises the compressed image files*** (Bryniarski [462], Col. 12, Lines 10-20).

Regarding to claim 18, Bryniarski [462] and Bryniarski [182] teaches all the claim subject matters as discussed in claim 12, Bryniarski [462] further discloses ***a memory media on which are stored machine instructions for carrying out the steps*** (Bryniarski [462], FIG. 6).

Allowable Subject Matter

13. Claims 14 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The closet available prior arts, USP 6,195,462 and USP 5,974,182, both issued to Bryniarski et al. also teaches a method and system of compressing image files. However, as in claims 14 and 31, Bryniarski fails to teach or suggest the step of ***determining a scaling factor based upon a currently available space remaining for the compressed files within the predefined limit and a total of the weight of all of the other image files, wherein the step of identifying image files that will be compressed with the predefined minimum quality level is repeated in successive passes through the set of image files, until a pass through the set of image files is completed without identifying any additional image file to be compressed to the predefined minimum quality level.***

Therefore, the invention is allowable over the prior arts of record for being directed to a combination of claimed elements including the providing steps as indicated above.

14. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing

delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q PHAM whose telephone number is 703-605-4242. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Hung Pham
September 3, 2004

SHAHID ALAM
PRIMARY EXAMINER